

Date: Thu, 18 Aug 94 01:29:56 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V94 #930  
To: Info-Hams

Info-Hams Digest                      Thu, 18 Aug 94                      Volume 94 : Issue    930

Today's Topics:

cell RF characteristics (2 msgs)  
clip art for QSL card  
Info on Code Quick (2 msgs)  
IOTA Information Wanted:  
Is there a course for learning Morse Code?  
List of Hams on Internet  
Mobile Radio Theft Insurance?  
RFI to a smoke detector  
VK2WI Weekly News, 31  
Where did Beverage come from?

Workshop On Microwave Technology - Cincinnati, Ohio - September 29-30

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----

Date: Mon, 15 Aug 1994 21:39:51 GMT  
From: murky.apple.com!trib.apple.com!agate!spool.mu.edu!uwm.edu!mixcom.com!  
kevin.jessup@decwrl.dec.com  
Subject: cell RF characteristics  
To: info-hams@ucsd.edu

In <32n42n\$2go@usenet.elf.com> hobbit@elf.com (\*Hobbit\*) writes:

>The amateur folks are starting to explore RF signal "signature" analysis  
>to help them find radio pirates. They've probably already got a fair  
>database on signal characteristics from popular transmitters, so they  
>could know pretty quickly what kind of radio the offending party had.

>Things that vary are usually frequencies and amplitudes, right at key-up.  
>There might be other things to look at, modulation distortion, etc...

Ok fellow radio amateurs, here's an aspect of amateur radio I hear talked about quite often and everyone has an opinion. Any EXPERT opinions out there?

The following are just GUESSES on my part...

Take the popular transmitter "finger printing" software/hardware advertised in the back pages of QST. Take 20 cheap radios (Alinco DJ180T) and see if this "fancy software" really can uniquely identify EACH AND EVERY radio without error in a random run of 1000 key-ups. Any guesses on accuracy??

Also, say your fancy fingerprinting data base DOES catch me on a repeater input frequency (this DOES require catching ME and not the repeater, right?). What happens if I change antennas? Power levels? What happens as my radio ages? Will the signature in you data base now match my radio under the new conditions?

How high of a sample rate is required to actually get accuracy in a 146 MHz transmitter finger print? ;-)) Nyquist says at least twice that, right? Must be some damn powerful hardware out there selling dirt-cheap in QST! ;-))

Are these fingerprinters using time-domain analysis, freq domain or both?

Given all of the above, does transmitter finger printing really work? Has it ever stood a test in a court of law?

If it DOES work, it still assumes the fingerprint you initially captured was obtained along with a valid call sign. This does NOTHING to catch pirate operators and freebanders.

--

```
/`-_      kevin.jessup@mixcom.com |  
{      }/ Marquette Electronics, Inc | Time for another tea party!  
\      / Milwaukee, Wisconsin, USA |  
|__*| N9SQB, ARRL, Amateur Radio |
```

-----

Date: 15 Aug 1994 23:13:48 GMT  
From: ihnp4.ucsd.edu!pacbell.com!sgiblab!gatekeeper.us.oracle.com!barrnet.net!  
agate!kennish@network.ucsd.edu

Subject: cell RF characteristics  
To: info-hams@ucsd.edu

In article <1994Aug15.213951.6948@mixcom.mixcom.com>,  
kevin jessup <kevin.jessup@mixcom.mixcom.com> wrote:

(Hobbit's remarks about fingerprinting deleted)

>Ok fellow radio amateurs, here's an aspect of amateur radio I hear talked  
>about quite often and everyone has an opinion. Any EXPERT opinions out  
>there?

>

>The following are just GUESSES on my part...

>

>Take the popular transmitter "finger printing" software/hardware advertised  
>in the back pages of QST. Take 20 cheap radios (Alinco DJ180T) and see  
>if this "fancy software" really can uniquely identify EACH AND EVERY  
>radio without error in a random run of 1000 key-ups. Any guesses  
>on accuracy??

Having not done this experiment, I can't comment on this part.

>Also, say your fancy fingerprinting data base DOES catch me on a repeater  
>input frequency (this DOES require catching ME and not the repeater,  
>right?). What happens if I change antennas? Power levels? What happens  
>as my radio ages? Will the signature in you data base now match my  
>radio under the new conditions?

Probably yes. Power level and antenna are irrelevant. Aging of the  
radio is probably not that important either as aging mostly  
changes the absolute frequency of the carrier. You are right about  
the repeater -- you have to catch the input signal, not the repeater.

>How high of a sample rate is required to actually get accuracy in  
>a 146 MHz transmitter finger print? ;-)) Nyquist says at least  
>twice that, right? Must be some damn powerful hardware out  
>there selling dirt-cheap in QST! ;-))

Ahh, another person who doesn't understand the Nyquist theorem.

>Are these fingerprinters using time-domain analysis, freq domain or  
>both?  
>

Transmitter fingerprinting uses the settling characteristics of  
the synthesizer inside the radio. It looks at the frequency vs. time  
characteristic of the radio as it is keyed up. Needless to say, you  
don't need to digitize at 2x146 MHz. The settling behavior is

controlled by the loop filter inside the synthesizer, along with the VCO. This is not a controlled characteristic in the sense that manufacturers don't try to make the radio settle in any particular way. Because of the way these synthesizers work, the loop filter is fairly narrow, which makes for a long settling tail, which makes for an easy signature.

All you need to do is to mix the incoming signal with a LO of the carrier frequency. The difference mix product is the error of the offending transmitter with respect to time. Remove DC to take care of master reference crystal error/drift due to age/temperature, and you have the dynamic characteristics of the radio. I suppose if you went in there and kept on tweaking the loop filter after each time you were obnoxious, it would make life difficult for the fingerprinter.

Anyone who knew enough to do that without breaking the radio should have much more productive things to do than to committ acts worthy of fingerprinting.

So in summary, fingerprinting is a good way of tracking down jerks on repeaters. Of course, to do it right costs a bit of money in equipment. I can't vouch for the product advertised in QST.

It probably won't stand up in court, by itself. It is more or less a tool to determine who the suspects are, and then one can use more traditional methods to proceed.

==Ken

-----  
Date: 17 Aug 1994 10:52:35 -0500  
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!cs.utexas.edu!news.tamu.edu!not-for-mail@network.ucsd.edu  
Subject: clip art for QSL card  
To: info-hams@ucsd.edu

In article <032016NTVUUXWGVETTUS@dbot.com>, <sysop@dbot.com> wrote:

>  
>Hello Mark,  
>  
>The files  
>dealing with ham clipart can be found in library HAM-6 on my board.  
>  
>The file names are:  
>ARRLART1.ZIP  
>ARRL\_ART.ZIP  
>CLIPAR.ZIP

>HAM-ART.ZIP  
>  
>  
>73 de Tim, KD4PYN, Sysop Database of Tennessee

Well folks, I called the DB of TN last night... Sure 'nuff, there was lots of clipart in the ART file library and the HAM-# libraries are definitely worth another long distance call! The only problem is, the ham clip art files listed are, I believe, from someone or something at ARRL. All four files have the same clips and to be honest, these clips are pretty lame. They actually defy description... they are in PCX format, which is just dandy, but these clips are most definitely not something you would want to put on a QSL card... oh well, the search continues... Still looking for clip art, or any art binaries that might be amenable to QSL card design.

BTW, Tim, nice BBS... I enjoyed using it and like the ease with which I was able to figure out the file search stuff and get on about my business as quickly as possible, instead of trying to figure out how to get to the files for an hour.

73 all... de N5RJF  
Mark

--  
Mark S. Whitsitt, N5RJF                      Texas A&M University, Dept of Biochemistry  
Internet: mwhitsitt@tamu.edu                      College Station, Tx. 77843-2128  
AMPRnet: n5rjff@n5rjff.ampr.org                      (409) 845-0832

-----  
Date: Wed, 17 Aug 1994 15:54:38 GMT  
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!  
gatech!ukma!rsg1.er.usgs.gov!dgg.cr.usgs.gov!bodoh@network.ucsd.edu  
Subject: Info on Code Quick  
To: info-hams@ucsd.edu

Hello,

Can anyone comment on the 'Code Quick' code tapes that claim to be a revolution in learning code? Are they worthwhile and as good as they claim? This is the one that says that they send the information to the language center of your brain (I hope they include the cables ;-). Thanks...

N0YGT

-----

Date: Thu, 18 Aug 1994 00:12:14 GMT  
From: gsm001!gsmlrn@uunet.uu.net  
Subject: Info on Code Quick  
To: info-hams@ucsd.edu

Tom Bodoh (bodoh@dgg.cr.usgs.gov) wrote:

: Can anyone comment on the 'Code Quick' code tapes that claim to  
: be a revolution in learning code? Are they worthwhile and as good as they  
: claim?

I think the claims are an understatement. :-)

I have been trying to learn code since 1965. I was never able to do it. I tried many methods including high speed code, low speed code, hypnosis tapes, computer programs, etc. No success.

Got the tapes in mid April, passed 5wpm with 100% of the questions and over 2 minutes of perfect copy on July 7.

My son was copying 100% at 4 wpm in one month at and keeps getting better every day.

He also went from fighting any attempt to make him study to liking the code. He now (using the Code Quick Plus+ program) studies on his own.

:This is the one that says that they send the information to the  
: language center of your brain (I hope they include the cables ;-). Thanks...

The cables are not needed, just a pair of headphones, a tape recorder, and about 1/2 an hour a day. Extra time spent listening to W1AW and sending practice help too, but it won't seem that way until you are done the course.

The computer program, Code Quick Plus+, helps too, but it does not replace the tapes.

Since I have been asked several times in the last few days for where to get it, here's their address:

Wheeler Applied Research  
38-221 Desert Greens West  
Palm Desert Ca, 92260

1-800-SUCH-THNX

I have no realtion to them except being a VERY satisified customer.

BTW, I have talked to people who have used it to upgrade from a barely passed 13 wpm to having passed the 20wpm easily.

73,

Geoff.

--

"I am number six. Others come and others go, but I am always numbersix."  
(From the movie "Eminent Domain".)

Geoffrey S. Mendelson N30WJ (215) 242-8712 gsm@mendelson.com

-----  
Date: Wed, 17 Aug 94 18:57:45 -0500  
From: news.delphi.com!usenet@uunet.uu.net  
Subject: IOTA Information Wanted:  
To: info-hams@ucsd.edu

I would like to obtain any information anyone might have about upcoming IOTA expeditions or QSL information about past or present operations. This information will be used in a new newsletter for IOTA chasers called The Island News which will be published twice monthly. Contributors will be sent a copy of the issue your information appears in. Vance W5IJU

-----  
Date: 13 Aug 1994 20:08:13 GMT  
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!nic-nac.CSU.net!  
charnel.ecst.csuchico.edu!olivea!spool.mu.edu!howland.reston.ans.net!gatech!udel!  
news.sprintlink.net!tracker.ramp.com!news@network  
Subject: Is there a course for learning Morse Code?  
To: info-hams@ucsd.edu

Either Mac or PC platform.  
Elliot Morris  
FEDERAL COMPUTER SALES  
16888 E. STERLING WAY  
FOUNTAIN HILLS, AZ  
85268

+1(602)837-0483

-----  
Date: 17 Aug 1994 18:08:47 GMT  
From: cronkite.cisco.com!sdarragh-mac.cisco.com!user@ames.arpa  
Subject: List of Hams on Internet  
To: info-hams@ucsd.edu

Is it possible to get a list of Hams on the newsgroup, with city and state and first personal?

Actually, I am most interested in Bay Area.

Scott

-----  
Scott R. Darragh      (KE6???)      On Planet Reebok, you punish their  
3535 Garrett Dr                      rusher, stick the receivers,  
Sant Clara, Ca 95054                intimidate their quarterback, and  
  
(415)-903-7173                      walk off the field with the  
cheerleaders.  
-----

-----  
Date: Wed, 17 Aug 1994 14:39:59 GMT  
From: ihnp4.ucsd.edu!news.cerf.net!gopher.sdsc.edu!news.tc.cornell.edu!  
news.cac.psu.edu!news.pop.psu.edu!psuvax1!uwm.edu!mixcom.com!  
kevin.jessup@network.ucsd.edu  
Subject: Mobile Radio Theft Insurance?  
To: info-hams@ucsd.edu

In <dginsberg-1608941254300001@198.207.32.23> dginsberg@gte.com (Don Ginsberg) writes:

>Does anyone know of specialized insurance companies that  
>will sell a stand-alone policy on ham radio equipment  
>mounted in your car. I believe that the ARRL has such  
>a service. Anyone know of others? An idea of prices?

I contacted my Farmers Insurance agent. We have two cars on the same policy. I told him I wanted our cell phones (portables that may or may not be left in the glove compartment) and any mobile or portable amateur radio



gear that might be left in the car to be insured against theft. For only and additional \$15.00 per vehicle per 6 months, it was added to our policy.

--

```
/'- _      kevin.jessup@mixcom.com |  
{      }/ Marquette Electronics, Inc | Time for another tea party!  
\      / Milwaukee, Wisconsin, USA |  
|__*| N9SQB, ARRL, Amateur Radio |
```

-----

Date: 17 Aug 1994 23:08:38 GMT  
From: news.delphi.com!gilbaronw0mn@uunet.uu.net  
Subject: RFI to a smoke detector  
To: info-hams@ucsd.edu

>Gary Coffman (gary@ke4zv.atl.ga.us) wrote:

>

>: In article <9408111908594.DLITE.gilbaronw0mn@delphi.com>  
gilbaronw0mn@delphi.com

>: (Gilbert Baron) writes:

>: >I have a big problem with the smoke detectors in my home. They squeal when I

>: >transmit on 40 meters. They are the type that are permanently wired to the

>: >ac line. Has anyone had this problem and knows what to do about it. I can

>: >try bypasses or chokes or some such thing on the line I guess? I may have to

>: >go to a battery operated detector perhaps? Any thoughts on this from anyone?

>: >Respond here and if you have really important information please email me

>: >too at gilbaronw0mn@delphi.com. Thanks in advance.

>

>: The standard treatment would be a couple of 2.5mH chokes in series

>: with the leads, and a .001 disc ceramic capacitor across the line.

>: However, if these are the type that talk to each other via carrier

>: current on the AC line so that all of them sound when one detects

>: smoke, you can't do this. You may be hosed. Your other alternative

>: is to try to get the 40 meter energy away from your wiring. Locate

>: your antenna higher and/or further away from the house.

>

>Gary is right; the chokes might interfere with the communication between the

>smoke detectors. In any event, it is not a good idea to put capacitors

>across an AC line unless the capacitors are \*AC\* rated.

>  
>The house wiring or interconnect wiring is probably resonant on 40 M.  
>In most cases, RF pickup on the AC lines is going to be common-mode, with  
>all three wires acting as if they were one wire. Get some FT-240-43 ferrite  
>cores (Ocean State Electronics has them in stock, credit card okay,  
>reasonable minimum order tel (401) 596-3590). You may have to extend the  
>length of the wiring, but if you wrap 5-10 turns of the AC and/or  
>interconnect wiring (all the wires wrapped together) onto the ferrite core,

>it will usually choke off any common-mode signal without affecting the  
>desired signal that connects all the detectors together.

>  
>I would first simplify the system a bit, perhaps with two units wired  
>together, just to find out which wiring or units are susceptible. Add the  
>other units back one at a time, debugging RFI as you go along.

>  
>If you happen to have some ferrite material laying about, go ahead and try  
>it. But if it doesn't work, don't assume that using the correct #43  
material

>won't work. I am always hearing tales of folks who buy "generic" toroids,  
or  
>use a single split bead, or one of the RS snap-together chokes, or the old  
>yoke from a TV set, only to find that they don't always work as well as one  
>might expect. The general rule is that if it fixes the problem, it is okay  
>to use, but if it doesn't, try the correct material before you give up and  
>go onto something else.

>  
>73 from ARRL HQ, Ed

>--

>Ed Hare, KA1CV, ARRL Laboratory, 225 Main, Newington, CT 06111  
>203-666-1541 ehare@arrl.org

>  
I appreciate all of the responses. I found that the simplest way to fix it  
was to replace them with battery operated detectors. No ac wiring so no  
antenna. It did the job and was really the quickest and cheapest way. These  
detectors are only 7-8 dollars each at the discount stores. You should have  
one anyplace that could be dangerous.

I realize that the battery could go down but the ac power could go off too.  
I think that batteries are better. I have always had battery ones and the  
warning they give by chirping as the battery gets low has always been  
suffficient for me.

Gil Baron, El Baron Rojo, WOMN Rochester, MN  
"Bailar es Vivir"  
PGP2.6 key upon request

-----

Date: Wed, 17 Aug 1994 06:06:24 GMT  
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!asuvax!ennews!stat!  
aznetig!daniel.meredith@network.ucsd.edu  
Subject: VK2WI Weekly News, 31  
To: info-hams@ucsd.edu

-> Path: stat!ennews!asuvax!cs.utexas.edu!howland.reston.ans.net!EU.net!  
-> From: ddavidso@metz.une.edu.au (Dean Davidson)  
-> Newsgroups: aus.radio,rec.radio.amateur.misc  
-> Subject: Re: VK2WI Weekly News, 31st January, 1994  
-> Message-ID: <6476@grivel.une.edu.au>  
-> Date: 17 Aug 94 03:56:05 GMT  
-> References: <31koq6\$rq4@eram.esi.com.au>  
-> Sender: usenet@grivel.une.edu.au  
-> Followup-To: aus.radio  
-> Organization: University of New England, Armidale, Australia  
-> Lines: 19  
-> Nntp-Posting-Host: metz.une.edu.au  
->  
-> In article <31koq6\$rq4@eram.esi.com.au> dave@eram.esi.com.au (Dave Ho  
-> >

Hi All,

I'm having problems with REPLIES to NEWSGROUP MAIL. Would Someone  
PLEASE tell me if this posts to the entire group properly???

I just need to know if the problem is fixed and someone sees the quotes  
and the fact I'm getting out...

Thanks in Advance!

Dan

```
\-----/
Daniel J. Meredith      |Internet: daniel.meredith@aznetig.stat.com
P.O. Box 44563          |   Ax.25: n7mrp@n7mrp.az.usa.na
Phoenix, Arizona       |ListOwner: f6fbb-list@stat.com
      85064-4563        |___|"ALL Comments Are My OWN, NOT My Employer"
      Voice : +1-602-809-7384 |   BELL ATLANTIC MOBILE SYSTEMS
Home & Fax : +1-602-956-2566 | Internet: ba.com
Data PBBS : +1-602-912-0225 |   Banyon: Daniel J. Meredith@CS_TEMPE@BAMASW
```

-----  
Date: 15 Aug 94 20:12:40 -0230  
From: ihnp4.ucsd.edu!pacbell.com!well!barrnet.net!agate!howland.reston.ans.net!

torn!news.unb.ca!coranto.ucs.mun.ca!leif!jcraig@network.ucsd.edu  
Subject: Where did Beverage come from?  
To: info-hams@ucsd.edu

In article <m24501-150894123129@m24501-mac.mitre.org>, m24501@mwunix.mitre.org  
(Herb Duncan) writes:

> In article <940813091331.e39@gms.mh.wp.kgf.com>, RGS@gfimda.UUCP (Robert G.  
> Schaffrath) wrote:

>> >I have seen other references to "beverage" in this group, but my  
>> >handy-dandy Random House shows only the usual definition for  
>> >the word. What does it mean in ham-ese?

>> >

>> >David F. Jenkins DJENKINS@jetson.uh.edu

>

> I remember reading somewhere that the term originated when the low-bands  
> were popular and some amateur radio antenna builders used to place a glass  
> beverage bottle at the base of a tall vertical radiator as an insulator  
> from ground.

> WE7L

> 74551.1275@compuserve.com

Hmmm, interesting. Actually the term refers to a long (1 or more  
wavelengths) wire antenna a few feet off the ground which is used  
to receive the lower frequencies. It is named after H. H. Beverage,  
a radio pioneer back in the 20's and 30's.

Long beverages, like the ones you drink, are better... up to a point!

V01NA

-----  
Date: Wed, 17 Aug 1994 07:00:24 -0600

From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!newsxfer.itd.umich.edu!  
nnntp.cs.ubc.ca!alberta!ve6mgs!usenet@network.ucsd.edu

Subject: Workshop On Microwave Technology - Cincinnati, Ohio - September 29-30

To: info-hams@ucsd.edu

### Workshop on Microwave Technology 2000 and Beyond

Aim: To provide an in depth overview of some of the major  
commercial application areas in Microwave Technology,  
to learn the state of art capabilities of defense technology  
and to simulate new commercial application areas that can use  
this technology. It will also provide a forum for presenting  
our present work in related areas.

When: September 29-30 , 1994.

Place: University of Cincinnati, 402 Tangeman Center, Cincinnati, Ohio

Organized by: Ohio Aerospace Institute, Microwave Technology Technet.

Participating Organizations: IEEE Cincinnati, Dayton and Cleveland Sections, University of Cincinnati.

Invited Lectures: Experts are invited to give presentations on some of the important emerging application areas related to microwave technology.

Program:

September 29, 1994, Thursday

9:00-11:00 Invited Talks

- Microwave and Millimeter Wave Development at NASA LeRC (G.E. Ponchak)
- Cellular Communication Systems (P. Odlynsko, Motorola)
- Microwave and Millimetric Wave Photonic Technology (B. Hendricksen, ARPA, Rome Lab.)

12:00-1:00 p.m. Lunch

1:00-3:00 Invited Talks

- Microwave Integrated Circuit Technology (M. Calcaterra, WPAFB)
- Industrial Applications of Microwaves (A.M. Ferendeci, UC)

3:00-5:00 p.m. Contributed Papers

September 30, 1994, Friday

9:00-12:00 Invited Talks

- Microwave Applications in Medicine (L. Taylor, Univ. MD)
- Technology Transfer To and From Radar (M. Skolnik, NRL)
- Intelligent Vehicle Highway Systems (R. Dixit, TRW)

12:00-1:00 p.m. Lunch

2:00-3:30 Panel Discussion

Microwave Technology: Defense to Industry Transition.

Moderator: D. Connolly, NASA LeRC.

Contributed Paper Presentation:

Short papers (not to exceed 10 min) will be accepted for presentation during the workshop to provide the ongoing research and development activity related to the commercial and industrial applications of Microwave Technology. Papers especially related to microwave sensors, medical applications, industrial applications, IVHS, photonics at millimeter wavelengths, material characterization, measurement technology and high power commercial applications are encouraged. Proceedings of the workshop will be available for distribution during the workshop. Please send an abstract not to exceed 250 words to Altan M. Ferendeci, ECE Dept. University of Cincinnati, Cincinnati, Ohio 45221-0030. Fax: (513) 556-7326. Deadline for receipt of abstracts is Sept. 12, 1994.

Hotel Reservations: Rooms are reserved for the workshop at  
Vernon Manor Hotel, 400 Oak St. near the University.  
Please call 1-800-543-3999 or 1-513-281-3300 and mention  
UC Microwave Workshop. Please register before Sept.14,1994.

Registration: In advance (before Sept 15, 1994).

For further information, contact:

Altan M. Ferendeci - University of Cincinnati  
(513) 556 4759  
aferende@uceng.uc.edu

Denis J. Connolly - NASA LeRC  
(216) 433 3503

Norma Navarro - OAI  
(216) 962 3014  
yynav@oai-pop.lerc.nasa.gov

--

Doug Greenwald	DougGreenwald@oai-pop.lerc.nasa.gov
Unix and Network Administrator	(216) 962 3145
ICOMP, Ohio Aerospace Institute, NASA Lewis Research Center	

-----

End of Info-Hams Digest V94 #930  
\*\*\*\*\*